CLAIMS

What is claimed is:

1	1. A microelectronic package, comprising:
2	a microelectronic package core having a first surface and an opposing second
3	surface, said microelectronic package core having at least one opening defined therein
4	extending from said microelectronic package core first surface to said microelectronic
5	package core second surface;
6	at least one microelectronic die disposed within said at least one opening, said at
7	least one microelectronic die having an active surface; and
8	an encapsulation material adhering said microelectronic package core to said at
9	least one microelectronic die.
1	2. The microelectronic package of claim 1, wherein said encapsulation
2	material further includes at least one surface substantially planar to said microelectronic
3	die active surface and said microelectronic package core first surface.
1	3. The microelectronic package of claim 2, further including build-up layers
2	disposed on at least one of said microelectronic die active surface, said at least one
3	encapsulation material surface, and said microelectronic package core first surface.
1	4. The microelectronic package of claim 3, wherein said build-up layers
2	comprise at least one dielectric layer abutting at least one of said microelectronic die

- active surface, said at least one encapsulation material surface, and said microelectronic
- 4 package core first surface and at least one conductive trace disposed on said at least one
- 5 dielectric layer.
- 1 5. The microelectronic package of claim 4, wherein said at least one
- 2 conductive trace extends through said at least one dielectric layer to contact at least one
- 3 electrical contact on said microelectronic die active surface.
- 1 6. The microelectronic package of claim 1, wherein at thickness of said
- 2 microelectronic die is greater than a thickness of said microelectronic package core.
- The microelectronic package of claim 6, wherein said microelectronic
- 2 package core includes at least one via extending therethrough.
- 1 8. The microelectronic package of claim 1, wherein said microelectronic
- 2 package core is selected from the group consisting of bismaleimide triazine resin based
- 3 material, an FR4 material, polyimides, ceramics, and metals.
- 1 9. A method of fabricating a microelectronic package, comprising:
- 2 providing a microelectronic package core having a first surface and an opposing
- 3 second surface, said microelectronic package core having at least one opening defined

- 4 therein extending from said microelectronic package core first surface to said
- 5 microelectronic package core second surface;
- disposing at least one microelectronic die within said at least one opening, said at
- 7 least one microelectronic die having an active surface; and
- 8 adhering said microelectronic package core to said at least one microelectronic
- 9 die with an encapsulation material.
- 1 10. The method of claim 9, wherein adhering said microelectronic package
- 2 core to said at least one microelectronic with said encapsulation material further includes
- 3 forming at least one encapsulation material surface substantially planar to said
- 4 microelectronic die active surface and said microelectronic package core first surface.
- 1 11. The method of claim 10, further including:
- forming at least one dielectric material layer on at least a portion of said
- 3 microelectronic die active surface, said at least one encapsulation material surface, and
- 4 said microelectronic package core first surface;
- forming at least one via through said at least one dielectric material layer to
- 6 expose a portion of said microelectronic die active surface; and
- 7 forming at least one conductive trace on said at least one dielectric material layer
- 8 which extends into said at least one via to electrically contact said microelectronic die
- 9 active surface.

- 1 12. The method of claim 11, further including forming at least one additional
- 2 dielectric material layer disposed over said at least one conductive trace and said at least
- 3 one dielectric material layer.
- 1 13. The method of claim 12, further including forming at least one additional
- 2 conductive trace to extend through and reside on said at least one additional dielectric
- 3 material layer.
- 1 14. The method of claim 9, wherein said providing said microelectronic
- 2 package core comprises providing a microelectronic package core selected from the
- 3 group consisting of bismaleimide triazine resin based material, an FR4 material,
- 4 polyimides, ceramics, and metals.
- 1 15. A method of fabricating a microelectronic package, comprising:
- 2 providing a microelectronic package core having a first surface and an opposing
- 3 second surface, said microelectronic package core having at least one opening defined
- 4 therein extending from said microelectronic package core first surface to said
- 5 microelectronic package core second surface;
- 6 abutting a protective film against said microelectronic package core first surface,
- 7 wherein said protective film spans said at least one opening;

8	disposing at least one microelectronic die within said at least one opening,
9	wherein an active surface of said microelectronic die abuts a portion of said protective
10	film;
11	adhering said microelectronic package core to said at least one microelectronic
12	die with an encapsulation material, wherein a portion of said encapsulation material fills a
13	portion of said opening to form at least one encapsulation material surface abutting said
14	protective film; and
15	removing said protective film.
1	16. The method of claim 15, further including:
2	forming at least one dielectric material layer on at least a portion of said
3	microelectronic die active surface, said at least one encapsulation material surface, and
4	said microelectronic package core first surface;
5	forming at least one via through said at least one dielectric material layer to
6	expose a portion of said microelectronic die active surface; and
7	forming at least one conductive trace on said at least one dielectric material layer
8	which extends into said at least one via to electrically contact said microelectronic die
9.	active surface.
1	17. The method of claim 16, further including forming at least one additional
2	dielectric material layer disposed over said at least on conductive trace and said at least

one dielectric material layer.

- 1 18. The method of claim 17, further including forming at least one additional
- 2 conductive trace to extend through and reside on said at least one additional dielectric
- 3 material layer.
- 1 19. The method of claim 15, wherein said providing said microelectronic
- 2 package core comprises providing a microelectronic package core selected from the
- 3 group consisting of bismaleimide triazine resin based material, an FR4 material,
- 4 polyimides, ceramics, and metals.
- 1 20. The method of claim 15, wherein said abutting said protective film
- 2 includes abutting said protective film having an adhesive against said microelectronic
- 3 package core first surface.
- 1 21. A method of fabricating a microelectronic package, comprising:
- 2 providing a microelectronic package core having a first surface and an opposing
- 3 second surface, said microelectronic package core having a plurality of openings defined
- 4 therein extending from said microelectronic package core first surface to said
- 5 microelectronic package core second surface;
- 6 abutting a protective film against said microelectronic package core first surface,
- 7 wherein said protective film spans said at least one opening;

8	disposing a plurality of microelectronic dice within corresponding openings of the
9	microelectronic package core, wherein active surfaces of each of said microelectronic
10	dice abuts a portion of said protective film;
Į1	adhering said microelectronic package core to said plurality of microelectronic
12	dice with an encapsulation material, wherein a portion of said encapsulation material fills

- adhering said microelectronic package core to said plurality of microelectronic dice with an encapsulation material, wherein a portion of said encapsulation material fills a portion of said openings to form a plurality of encapsulation material surfaces abutting said protective film;
- removing said protective film; and
 singulating each microelectronic die by cutting through said microelectronic
 package core.
 - 22. The method of claim 21, further including:
 - forming build-up layers on at least a portion of said microelectronic dice active surfaces, said plurality of encapsulation material surfaces, and said microelectronic package core first surface.
 - The method of claim 21, wherein said providing said microelectronic package core comprises providing a microelectronic package core selected from the group consisting of bismaleimide triazine resin based material, an FR4 material,
 - 4 polyimides, ceramics, and metals.

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- 1 24. The method of claim 21, wherein abutting said protective film includes
- 2 abutting said protective film having an adhesive against said microelectronic package
- 3 core first surface.